

To continually examine our processes to provide greater value to our customers without waste.

## Ohio's Lean & Green Special Hazards 5S

Youngstown captured the "WOW" effect with a Lean 5S event in their Special Hazards shop in early November. In addition to the standard Sort, Straighten and Sweep portion of a 5S event, the team was empowered to make many improvements that helped their branch be more Lean, safe, and "Green".



The team was led by our Alarm & Detection dept and included employees from Sprinkler Design, Sales, Special Hazards Sales, Administration, and our Truck Driver. The team also received assistance from our Service Manager, a Sprinkler Fitter and an Electrician from our Milwaukee location.

### Equipment improvements included:

- The metal-cutting band saw and chop saw were both mounted on wheeled bases and assigned designated marked areas
- The Grinder was also assigned a designated marked area
- The chain hoist was labeled for capacity, and daily inspection & use forms were posted



### Safety improvements included:

- Perimeter & side protrusions of the pipe storage rack were marked with yellow/black striped safety tape, while the longest pipe at head level was fitted with a 6" lime green Nerf ball to prevent head/eye injuries
- Fire extinguisher locations were labeled
- At the loading dock, the dock edge was identified with safety tape, and the overhead door opening was marked with a yellow safety barrier chain & Caution Sign
- Flammable Isopropyl & Denatured Alcohol were placed in safety cans
- Flammable spray paint, adhesives and cleaners were placed in a new metal storage cabinet

### Areas designated to reduce wasted steps included:

- Battery Recycling: Near door, convenient to carry in from job & out to recycling truck
- Scrap Metal Storage: Near rear overhead door to facilitate loading on truck when taken to scrap yard
- Returned Material from Jobs: Near front overhead door to reduce steps when unloading truck and near mezzanine stairs to reduce steps when material is returned to storage area
- Outgoing Material to Jobs: Near fabrication area and away from Returned Material Area to avoid confusion
- Fabrication Carts: Located adjacent to fabrication area



## Ohio's Lean & Green Special Hazards 5S: Continued



### Workbench improvements included:

- A rack fabricated from CVPC pipe & Tee's to hold cordless drills above the work bench. Previously, the drills were hung upside down from the battery from a pipe and were constantly being knocked off and having to be re-hung
- A replaceable Masonite top was affixed to top of work bench to provide an easily cleanable surface
- A hacksaw was mounted next to the bench vice with the grinder immediately to the side to save steps between. A trash drum was placed under the bench vise to catch metal filings from cutting & filing to reduce clean-up time. A foxtail brush was also hung to clean the vise after cutting or filing.



**Before**



**After**

### Electrical improvements included:

- New outlet added for the golf cart charger to eliminate the rolling and unrolling an extension cord for the monthly battery maintenance charge
- New retractable extension cord installed to eliminate rolling and unrolling cords used for panel fabrication & testing
- New quad outlet added for label printers
- New duplex outlet added for cordless drill chargers
- 2 existing fluorescent light fixtures cleaned, re-ballasted and re-lamped
- 4 existing metal halide and 1 fluorescent light fixture were replaced with energy-saving fluorescent fixtures utilizing motion sensors



### Energy Consumption to improve Ohio's "Green" sustainability rating included:

- New lighting in the shop area reduced energy consumption by almost 50% while increasing illumination 2 to 4 times greater than the old lighting
- A new switch location, fixtures and motion sensors will result in more energy and cost savings  
In the past, someone would check the pipe rack for material 2 to 3 times a week. The light switch was 30 steps beyond the rack (60 steps to switch and back). After 5 lights were turned on, they typically remained on for the rest of the day. In the evening, another 60 steps would be retraced to turn the lights off. With the installation of new fixtures and motion sensors, only 2 fixtures turn on and then automatically turn off in 8 minutes after motion is no longer sensed. The 120 steps (60 seconds) a day saved, multiplied by 3 times a week, multiplied by 52 weeks represents a time savings of 156 minutes (2.6 hours). At a charge-out rate of \$50/hr, this savings represents an annual savings of \$130 dollars in non-value added labor in addition to the energy savings.

Ohio will finish with a few Schedule issues including checklists and area photos to help them Sustain. The team implemented some great ideas that you might be able to incorporate in some of your work areas. Great job, Ohio!

**5S = Sort, Sweep, Straighten, Schedule, Sustain**